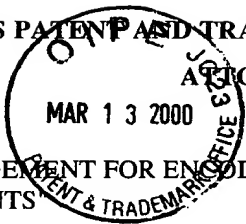


GP 2 #5/173
3/16/00
H. Paul

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Robert Kutka, et al.
SERIAL NO. 09/423,454
FILING DATE: November 8, 1999
INVENTION: "METHOD AND ARRANGEMENT FOR ENCODING AND DECODING A DIGITIZED IMAGE WITH PICTURE ELEMENTS"

ATTORNEY DOCKET NO. P99,2301
GROUP ART UNIT: 2713
EXAMINER:



RECEIVED

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

MAR 15 2000

Group 2700

HON. ASSISTANT COMMISSIONER OF PATENTS
Washington, D.C. 20231

Sir:

Submitted herewith is an Information Disclosure Statement for consideration in the above-identified application. This Information Disclosure Statement is submitted:

- ☒ Within 3 months (1) of filing date of a national application; (2) of date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application; or (3) before the mailing date of a first Office Action on the merits, whichever occurs last. (No fee is required.)
- ☐ After the mailing date of a first Office Action but before (1) mailing of a final action under 37 C.F.R. §1.113; or (2) mailing of a notice of allowance under §1.311, whichever occurs first.
 - ☐ Payment for the fee set forth in 37 C.F.R. §1.17(p) accompanies this submission; or
 - ☐ The certification specified in 37 C.F.R. §1.97(e) is made below. (No fee is required.)
- ☐ After the mailing of (1) a final action under 37 C.F.R. §1.113; or (2) a notice of allowance under 37 C.F.R. §1.311 whichever occurs first, but **before** payment of the issue fee. The certification specified in 37 C.F.R. §1.97(e) is made below. The Commissioner hereby is petitioned to consider the Information Disclosure Statement accompanying this submission. Payment for the Petition fee set forth in 37 C.F.R. §1.17(i)(1) accompanies this submission.
- ☐ The undersigned counsel for applicant(s) hereby certifies each item of information identified in the Information Disclosure Statement was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- ☐ The undersigned counsel for applicant(s) hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign Patent Office in a counterpart foreign application, or to the knowledge of the undersigned, after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
- ☐ A check in the amount of \$__ to cover any required fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 08-2290. *A duplicate copy of this sheet is enclosed for this purpose.*

Very respectfully,

HILL & SIMPSON

A Professional Corporation

By

David R. Meyer Reg. 32,919

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When phoning re this application,
please call (312) 876-0200 Ext. 3084

CERTIFICATE OF MAILING

I hereby certify that this Information Disclosure Statement is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington D.C. on March 10, 2000.

David R. Meyer

**RECEIVED****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****Group 2700****INFORMATION DISCLOSURE STATEMENT**

APPLICANT(S): Robert Kutka et al. ATTORNEY DOCKET NO.: P99,2301
SERIAL NO.: 09/423,454 GROUP ART UNIT: 2713
FILING DATE: November 8, 1999 EXAMINER: Unknown
INVENTION: "METHOD AND ARRANGEMENT FOR ENCODING AND
DECODING A DIGITIZED IMAGE WITH PICTURE ELEMENTS"

Hon. Assistant Commissioner for Patents
Washington, DC 20231

S I R:

In accordance with the provisions of 37 C.F.R. §1.56, Applicants request that citation and examination of the references identified on the attached PTO-1449 form, copies of which are enclosed herewith accompanied by English-language Derwent abstract, where required, in accordance with 37 C.F.R. §1.98, be made during the course of examination of the above-mentioned application for United States Patent. Except as provided, the undersigned does not possess English translations of the non-English references.

I. SUBMITTED UNITED STATES PATENT REFERENCES

<u>Reference</u>	<u>Patent Number</u>	<u>Patentee</u>	<u>Issue Date</u>
AA	5,568,196	Hamada et al.	October 22, 1996
AB	5,418,714	Sarver	May 23, 1995

II. SUBMITTED FOREIGN PATENT REFERENCES

<u>Reference</u>	<u>Patent Number</u>	<u>Country</u>	<u>Publication Date</u>
AD	98/15125	PCT	April 9, 1998
AE	196 04 050	Germany	February 20, 1997

III. SUBMITTED PUBLICATIONS

AF W. Zeng et al., "Directional Spatial Interpolation for DCT-Based Low Bit Rate Coding", Proceedings of the International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Vol. 4, May 7-10, 1996, pp. 2100-2103.

- AG Z. He et al., "An Adaptive Image Coding Technique Using Interpolative Mixed VQ", Proceedings of the International Symposium on Circuits and Systems, San Diego, May 10-13, 1992, Vol. 5, May 10 1992, pp. 2300-2303.
- AH H. Sun et al., "Subsampled Vector Quantization with Nonlinear Estimation Using Neural Network Approach", SPIE, Visual Communications and Image Processing '91: Visual Communicaiton, Vol. 1605, pp. 214-220.
- AI R. Kutka et al., "Improving the Image Quality of Block-based Video Coders by Exploiting Interblock Redundancy", Proc. Of the First International Workshop on Wireless Image/Video Communications, Loughborough, UK, Sept. 4-5, 1996, IEEE, pp. 48-56.
- AJ S. Panis et al., "Reduction of Block Artifacts by Selective Removal and Reconstruction of the Block Borders", PCS 97, Picture Coding Symposium, Berlin, Germany, Sept. 10-12, 1997, No. 143, pp. 705-708.
- AL F. Hofmeir, "Multimedia für unterwegs", Funkschau, No. 7, 1996, pp. 75-77.
- AM D. Le Gall, "MPEG: A Video Compression Standard for Multimedia Applications", Communications of the ACM, Vol. 34, No. 4, April 1991, pp. 47-58.
- AN M. Liou, "Overview of the px64 kbit/s Video Coding Standard", Communications of the ACM, Vol. 34, No. 4, April 1991, pp. 60-63.
- AO G. Wallace, "The JPEG Still Picture Compression Standard", Communications of the ACM, Vol. 34, No. 4, April 1991, pp. 31-44.
- AP B. Girod et al., "Spatial Shaping: A Fully Compatible Improvement of DCT Coding", Picture Coding Symposium, Lausanne, Switzerland, 1993.
- AQ R. Kutka et al., "Quality improvement of low data-rate compressed video signals by pre- and postprocessing", SPIE, Digital Compression Technologies and Systems for Video Communications, Vol. 2952, Oct. 7-9, 1996, pp. 42-49.
- AR S. Minami et al., "An Optimization Approach for Removing Blocking Effects in Transform Coding", IEEE Transactions on Circuits and Systems for Video Technology, Vol. 5, No. 2, April 1995, pp. 74-82.
- AS ITU-T Recommendation H.245, Control protocol for multimedia communication, February 1998.

IV. REMARKS

References AA, AB, AD, AF, AG, AH, AI and AJ were cited during earlier PCT examination proceedings. Reference AD, which is in German, discloses a vector quantisation method for digitized image. Since references AA, AB, AF, AG, AH, AI and AJ are in English no further commentary concerning their teachings is necessary.

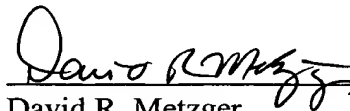
References AE, AL, AM, AN, AO, AP, AQ, AR and AS were cited for the reasons noted in the Applicants' specification. Reference AE, which is in German, discloses an edge pixel smoothing of block-coded images. Reference AL is in German, and no English translation is presently available. However, if the Examiner desires such, Applicants will provide it upon request. Since references AM, AN, AO, AP, AQ, AR and AS are in English, no further commentary concerning their teachings is necessary.

None of the above references discloses or suggests a method and arrangement for encoding and decoding a digitized image with picture elements as disclosed and claimed in the present invention.

As of the date of mailing of this Information Disclosure Statement, a first Office Action on the merits has not been received in connection with this application, and therefore, this Information Disclosure Statement is in compliance with 37 C.F.R. §1.97(b), and no fee is necessary.

In view of the foregoing, Applicants submit that all claims of the application are patentably distinguishable over the teachings of the above references, taken singly or in combination. Early consideration of the application is, therefore, requested.

Respectfully submitted,



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